

## REMARKS

After entry of the subject amendment, claims 20-33 remain in the application with claims 20 and 21 in independent form. More specifically, in this amendment, claims 1-19 have been cancelled, claim 20 remains unchanged, and claims 21-33 have been added. There is full support in the application for new claims 21-33. Accordingly, no new matter has been added.

Claims 1 and 12-14 stand rejected under U.S.C. § 102(b) as being anticipated by Bolmstedt et al. (United States Patent No. 4,706,741). Claims 2-10 and 15-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bolmstedt et al., in view of Nakamura et al. (United States Patent No. 6,241,011).

The claims have been amended to more directly focus on the inventive features of the subject invention. To this end, new claim 21, an independent claim, claims not all, but various features of prior claims 1, 2, 6, 7, 9, and 10. More specifically, independent claim 21 has been introduced to focus on the mechanical relationship of the inlet manifold, the return tank, and the outlet manifold, in combination with the first and second pairs of plates with the first pair defining a first cavity and the second pair defining a second cavity. As is claimed in independent claim 21:

- the inlet manifold is in communication with only the first cavity (relative to the first and second cavities) for directing the fluid through the evaporator in a first direction;
- the return tank is in communication with the first cavity for receiving the fluid from the first cavity and with the second cavity for directing the fluid through the evaporator in a second direction opposite the first direction; and
- the outlet manifold is in communication with only the second cavity relative to the first and second cavities for evacuating the fluid from the second cavity out of the evaporator.

With this mechanical relationship, the fluid stream of refrigerant can be directed in alternating directions in adjacent pathways along a height of the evaporator...as described in the original specification. For example, a first fluid stream moves in the first direction, the second fluid stream moves in the second direction opposite the first direction, and a third fluid stream would move in the first direction, i.e., the same direction as the first fluid stream. As such, each unit, or particle, of refrigerant is only exposed to a limited number of passes as compared to the prior art. Specifically, in the invention as now claimed, each unit of refrigerant only makes two passes through the evaporator, as compared to the more typical four or more

passes associated with the conventional evaporators of the prior art, thereby providing improved cooling capacity for the evaporator of the claimed invention. This phenomenon is clearly advantageous over the prior art and was described in greater detail in the original specification at Paragraph [0043]. Additional advantages resulting from the invention as now claimed in independent claim 21 include, but are not limited to, (1) improved temperature uniformity of evaporator discharge air, (2) "hot spots", (3) lower refrigerant side pressure drop, (4) and reduced power consumption are described in detail in Paragraphs [0042], [0042], [0043], and [0045], respectively.

The Applicant respectfully notes that the § 102(b) rejection relying on Bolmstedt et al. is now moot in view of the cancellation of claims 1 and 12-14 (1-19 in total).

As for the § 103(a) relying on Bolmstedt et al. in view of Nakamura et al., the Applicant respectfully traverses the rejection of independent claim 20. In doing so, the Applicant recognizes that the features of independent claim 20 relating to the inlet manifold, the return tank, and the outlet manifold now appear in new independent claim 21. To this end, the Applicant traverses any § 103(a) relying on Bolmstedt et al. that would be applied to new independent claim 21. No appropriate *prima facie* case of obviousness can be established by the Examiner relying on this prior art, either alone or in combination with Nakamura et al.

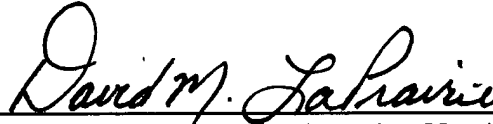
As the Examiner is aware, to appropriately establish the requisite *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. MPEP 2143. The teaching or suggestion to make the claim combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.

Simply stated, Bolmstedt et al. does not disclose, teach, or even suggest the stacked first and second pairs of plates defining the inlet manifold, the return tank, and the outlet manifold as claimed in independent claim 20 and as now claimed in new independent claim 21 that enable the fluid stream of refrigerant to be directed in alternating directions in adjacent pathways. Furthermore, Nakamura et al. does nothing to remedy the deficiency in the disclosure and teachings of Bolmstedt et al.

In view of the remarks set forth above relative to claim 20 and in view of the elements now claimed in independent claim 21, these claims are allowable over the prior art. The remaining claims, specifically dependent claims 22-33, depend from the novel and non-obvious features of independent claim 21 such that these claims are also allowable.

It is respectfully submitted that the application is now presented in condition for allowance, which allowance is respectfully solicited. The Commissioner is authorized to charge Deposit Account No. 08-2789 for any additional fees or to credit the account for any overpayment.

Respectfully submitted,  
**HOWARD & HOWARD ATTORNEYS**

A handwritten signature in cursive script, reading "David M. LaPrairie", written over a horizontal line.

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**CERTIFICATE OF EXPRESS MAIL**  
**PURSUANT TO 37 C.F.R. §§ 1.6 AND 1.8**

I hereby certify that this **Amendment, RCE and fee** are being deposited with the United States Postal Service as Express Mail, Label No. EV695475558US postage prepaid, in an envelope addressed to Commissioner of Patents, Mailstop RCE , P.O. Box 1450, Alexandria, Virginia 22313-1450, on **March 7, 2006**.

*Sandra L. Barry*

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